



Owner's manual & Installation manual
Mode d'emploi et manuel d'installation
Bedienungs- und Montageanleitung
Manuale di istruzioni e di installazione
Gebruiksaanwijzing & Montagehandleiding
Manual de instrucciones y manual de instalación
Bruksanvisning & installationsanvisningar
Manual do utilizador & Manual de Instalação

CC-2011E

Vehicular Rear-View Color Camera
Caméra couleur de rétrovision pour véhicule
Farbheckkamera für Fahrzeuge
Telecamera a colori per la visione posteriore
Achteruitkijk-kleurencamera voor voertuigen
Cámara en color de visión posterior para vehículos
Bakåtriktad färgkamera för fordon
Câmara a Cores Retrovisora para Veículos

Thank you for purchasing this **Clarion** product.

- * Please read this owner's manual in its entirety before operating this equipment.
- * After reading this manual, be sure to keep it in a handy place (e.g., glove compartment).
- * Check the contents of the enclosed warranty card and keep it carefully with this manual.

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1. FEATURES

- High-performance 1/4" color CCD solid-state imaging element
- Wide-angle lens, allowing broad field of view
- High-resolution glass lens for high image quality
- Mirror-image inversion function presents optimum conditions for confirming rear view (same right-left orientation as seen through a rear-view mirror)
- Small size and weight for easy installation

2. PRECAUTIONS

INFORMATION FOR USERS:

CHANGES OR MODIFICATIONS TO THIS PRODUCT NOT APPROVED BY THE MANUFACTURER WILL VOID THE WARRANTY.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions,

may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to consult the dealer or an experienced radio/TV technician for help.

⚠ WARNING

- **This device has been designed exclusively for use with a vehicular mounted rear-view television system. It should not be used for other purposes.**
- **Disconnect the vehicle's negative (–) terminal when installing wiring.**
- **Do not attempt to disassemble or modify this product.**
- **In the event it is necessary to drill holes in the vehicle for mounting, confirm that the drill bit or camera wiring will not strike or interfere with piping, gas tank, electrical wiring or other functional parts of the vehicle.**
- **Do not rely solely on the monitor image when reversing the vehicle.**
The rear-view monitor is an auxiliary device meant for confirming the presence of obstacles to the rear of the vehicle, and is limited in its range. It should be used only in conjunction with direct visual observations.
- **Always reverse at low speeds.**
The rear-view monitor produces a wide-angle image, with the result that actual distances may be different than they subjectively appear in the monitor.
- **Do not use when the imaging surface or other parts are malfunctioning.**
- **When installation and wiring are completed, confirm that the vehicle's horn, brake and warning lights, and other electrical equipment function properly as designed.**

⚠ CAUTION

- **Install only as directed in the Installation Manual.**
- **Install accessory parts as directed.**
- **When drilling holes in the vehicle for installation of wiring, always use insulated grommets in the holes to protect the wiring.**
- **If holes are drilled in the vehicle to install the camera, or when installing wiring, use silicon sealant to seal any gaps.**
- **Do not damage or scar the camera wiring.**
- **After completing the camera wiring, use cable clamps or insulation tape to bundle the wiring together.**
- **The images produced from the rear-view monitor are inverted right-left in the same way as images seen in the vehicle's rear-view mirrors. The image may differ depending on the vehicle type.**
- **Do not use high-pressure car washing devices around the camera.**
The camera is a high-precision instrument and should not be subjected to high-pressure water stream impacts.
- **Periodically check the tightness of the installation screws and retighten if necessary.**

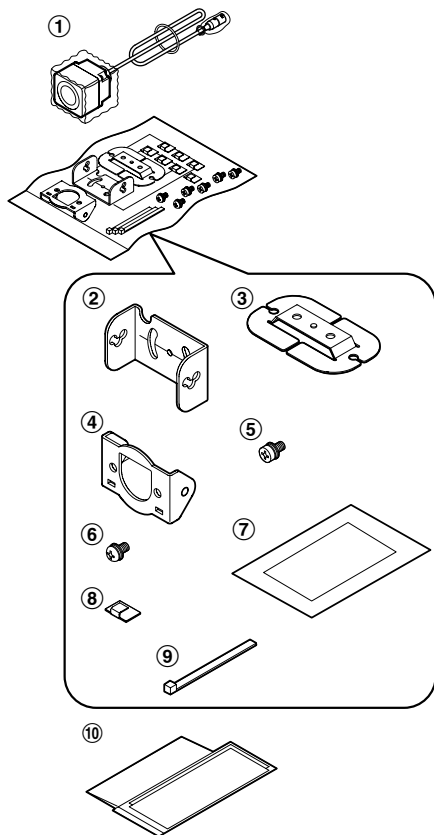
3. SPECIFICATIONS

Power source/voltage:	DC 9 V (± 0.5 V)
Power consumption:	120 mA or less
Image sensor:	1/4" solid-state color CCD
Angle of view:	About 130° (horizontal) About 97° (vertical)
Minimum subject illumination:	3 LUX or less (2 LUX ± 1 LUX)
SN ratio:	48 dB or more (AGC-OFF)
Weight:	About 72 g (bracket and 0.5 m cable)
Dimensions:	27 (W) \times 25 (H) \times 28.3 (D) mm

Note:

- Specifications and design are subject to change without notice for further improvement.

Package contents



① Camera (with 0.5 m cable)	1
② Mounting bracket A	1
③ Mounting bracket B	1
④ Mounting bracket C	1
⑤ Installation screws (hex head M3 x 6)	4
⑥ Installation screws (pan head M3 x 6)	2
⑦ Cleaning fluid (for use in preparing surface for 2-sided tape)	1
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4. OPERATION

Operation when using Clarion rear-view camera system

The rear-view image is displayed when the transmission is placed into reverse, or when the manual switch is operated.

Troubleshooting

The following symptoms are not malfunctions. Before having the unit serviced, check the following points once more.

Symptom	Reason	Solution
No image	Wiring is incomplete or disconnected.	Check wiring once again and confirm correct connections.
	A fuse is burned out.	When using an independent power supply box, check the fuse and, if burned out, replace with a new one of the same capacity (1 A). If the fuse burns out repeatedly, consult your dealer or nearest Clarion Service Center.
Poor image is produced	The lens cover is soiled.	Wipe lightly with a damp soft cloth. Do not rub harshly with dry cloths since scratches may be produced.
	Sunlight or headlights from a vehicle in the rear are shining directly in the camera.	The image will return to normal when the light striking the lens is removed.
	The environment is too dark.	The image display will be poor at night or in dim light. The image will return to normal in conditions of brighter illumination.
	The level of illumination outside the vehicle changed too abruptly. 1. When moving from a bright to a dark location (especially from bright sunlight to shade), the image may appear excessively dark. 2. When moving from a dark to a bright location (especially from shade into bright sunlight), the screen image may appear excessively bright.	[When using a separate power supply box] • In auto mode Stop the vehicle and set the transmission to neutral, then once again to reverse. • In manual mode Press the AUTO/MANUAL switch to set the unit to AUTO, then press once again to set to MANUAL. If the transmission is in reverse, set it to neutral before pressing the switch.

5. INSTALLATION

Before installation

- Before installing the camera or its wiring, read all safety warnings and be sure to install the unit correctly.
- Before installing the camera permanently, use adhesive tape to mount the camera in its proposed position, then check the image in the monitor to confirm proper display before fixing the camera in its final position.

⚠ WARNING

- **Disconnect the battery's negative (-) terminal installing wiring.**

Precautions when using two-sided tape for installation

- **Do not install on glass or body surfaces treated with fluorinated resins or other water-repellent treatments.**
- **Do not install within the sweep of a rear-window wiper, or near the window washer's nozzle.**
- **Abide by the following rules in order to prevent lowering of the installation tape's adhesion:**
 - As far as possible, install on a day with clear weather.
 - Within the first 24 hours after installation, do not expose the installation to moisture (water, rain, mist, snow, etc.), or subject the installation to strong forces or impacts.
 - When installation must be performed under conditions of low ambient temperature (20°C or below), use a hair dryer to warm the surface of the bracket where the 2-sided tape is to be applied.
 - Do not touch the bracket-mounting surface's 2-sided tape, and do not attempt to move or reset the tape after initial application.

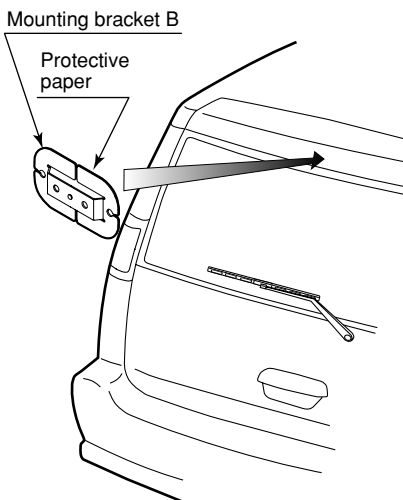
Installing/Wiring the camera

1. Install mounting bracket B

Use the supplied cleaner to clean the vehicle surface to which the bracket is to be applied, then remove the protective paper from the mounting surface of bracket B and press securely onto the vehicle surface.

Notes:

- Before using the supplied cleaner, read the label on the cleaner container thoroughly.
- Do not wipe the camera body with the cleaner, since it may be discolored or otherwise damaged.
- Before removing the protective paper on the bracket, place it in the proposed position on the vehicle and confirm that the surfaces match properly without gaps.
- When using screws to install the bracket, use the right-left screw holes provided on bracket B.



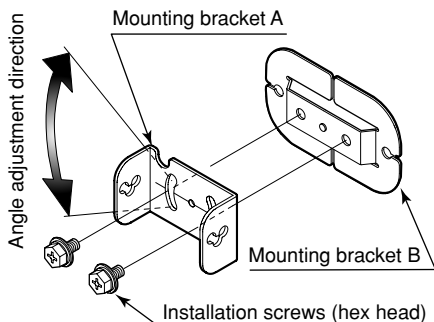
Installing/Wiring the camera

2. Install mounting bracket A

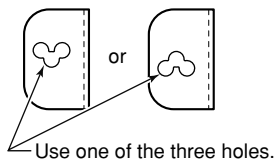
Using the supplied 2 installation screws (hex head M3 x 6), fasten bracket A to bracket B.

- While tightening the screws, adjust the angle of the bracket A to produce the optimum camera angle.

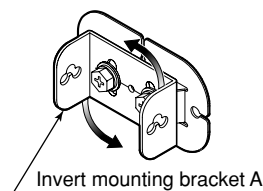
To mount the camera at a level angle, mount bracket A's engraved leveling line (—) even with the center of the installation screws when tightening.



- Adjust the camera angle as desired when tightening the screws for mounting bracket C. The camera's position can be adjusted by selecting from among the three sets of holes on the sides of mounting bracket A.

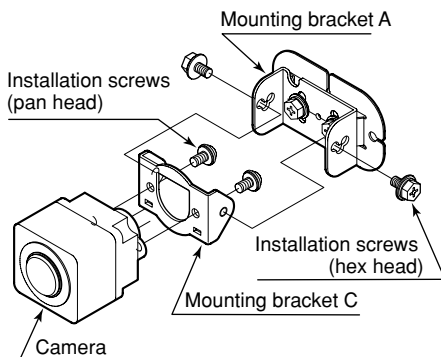


In addition, the mounting bracket A can be inverted (mounted upside down) if needed to provide additional range of camera installation.



3. Attach mounting bracket C to camera

Using the two pan head installation screws (M3 x 6), attach the camera to mounting bracket C, using the two hex head installation screws (M3 x 6) as shown, attach the camera and bracket C assembly to mounting bracket A.



⚠ CAUTION

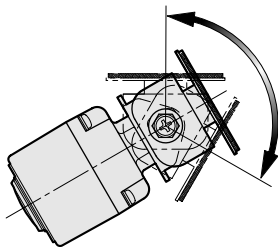
- When adjusting the camera position, do not allow the camera cable to be excessively stretched or loose.
- Periodically check the tightness of the installation screws and retighten if necessary.

Installing/Wiring the camera

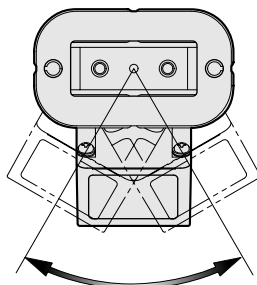
■ Adjusting camera angle (example)

⚠ CAUTION

When the camera angle has been changed, the range displayed by the image on the monitor will change. Always confirm by direct observation when backing the vehicle.



Adjust the angle of brackets A+B as required by the mounting position.



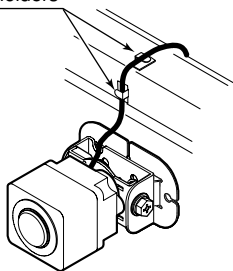
Adjust horizontal angle while confirming image on monitor.

6. WIRING

Wiring

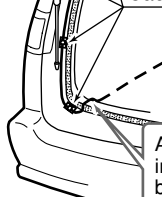
- ① Lead the camera cable into the vehicle and align it along the vehicle weather stripping. Use the supplied cable holders as necessary to fix the wires in place and prevent them from being pinched in hinges or dampers.
- ② Using an optional extension cable, the camera cable can be installed under the vehicle floor (carpet) to connect to a Clarion rear-view monitor or independent power supply box (CAA-188).

Cable holders

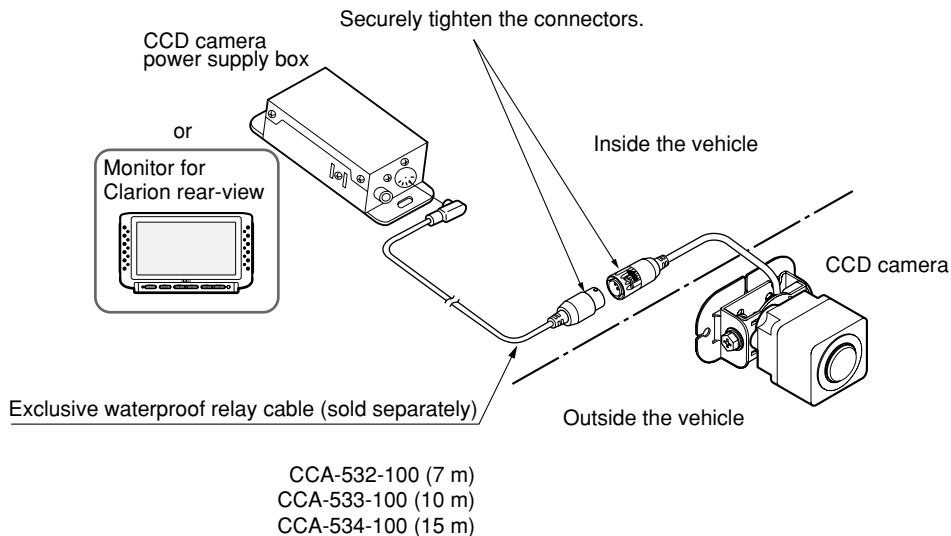


Fix the cable with adequate looseness in this area to prevent it from being stretched or pinched in the hinge when the rear gate is opened and closed.

Cable holders



Always introduce the cable into the vehicle from the bottom (floor) side. Introducing the cable from the door top or side may lead to penetration by water.



Note:

- See the Instruction Manual supplied with the monitor for information regarding wiring, operation, and composition of the monitor unit.

Waterproof Connector Fastening Procedure and Cautions

- ① ▲ Mark : Align the arrow marks on both connectors in order to connect the cable.

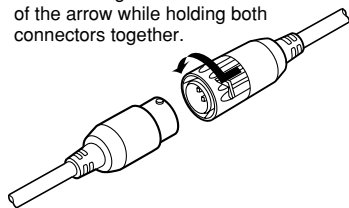


Exclusive waterproof relay cable (female)

Camera cable (male)

- ② Hold the two connectors together and twist the ring on the camera cable's connector as far as it will go.

Twist the ring in the direction of the arrow while holding both connectors together.



CAUTION

Twist the yellow ring until there is no gap between the ring and the connector.

Should there be any gap between the ring and the connector, twist the ring to close it.

